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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,216	02/14/2006	Frans Johan Sarneel	19790006US1CER030018	6282

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EXAMINER	
KING, FELICIA C	

ART UNIT	PAPER NUMBER
1794	

NOTIFICATION DATE	DELIVERY MODE
03/04/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

Office Action Summary	Application No.	Applicant(s)	
	10/568,216	SARNEEL ET AL.	
	Examiner	Art Unit	
	FELICIA C. KING	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 December 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7 and 9-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,9-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in Response to Applicants Remarks filed 12/4/09.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Regarding claim 12, the phrase "and/or" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. **Claims 1-4, 6-7, 9-10, 12-25, and 27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sarneel et al. (WO 04/084640) in view of Sakuma et al. (WO 03/067999) and Roberts (US 4,103,038).**

Regarding Claims 1-4, 6-7, 9-10, and 12-15: Sarneel discloses a multipurpose dry mix comprising 15-28% w/w fat, 25-65% w/w carbohydrates, and 10-20% w/w proteins (Sarneel; Abstract and page 3, ¶ 1). The dry mix is suitable for any product requiring a filling and which is then consumed as such, baked or fried, such as bread-rolls, pound cake, sponge cake, chiffon cake, and the like (Sarneel; page 13, ¶ 5-8). The carbohydrates are selected from a group consisting of starch, starch hydrolysates, emulsifying starch, and dextrin. The emulsifying starch is preferably

starch n-octenyl succinate that can be undextrinized, dextrinized, cooked-up and/or mixture thereof. The dry mix further can contain in minor amounts vitamins, flavors, edible acids, and/or mixtures thereof (Sarneel; page 8-9). Sarneel further discloses a complete mix comprising the dry mix and a liquid selected from water, savory sauce, sweet sauce, dairy-based liquids, and mixtures thereof. The completed mix is based on a weight ratio of dry mix to liquid from 1:0.5 to 1:2 (Sarneel; page 11, ¶ 1-4). Thus, to choose a specific combination of dry composition to liquid composition would be within the ordinary ingenuity of one of ordinary skill in the art and would depend on the desired characteristics for the bakery product. Sarneel also discloses a preferred amount of starch n-octenyl succinate but it is outside the range of the instant claim and does not disclose whey protein. However, Sakuma discloses an oil/fat powder, as an additive for baked products, comprising 15 to 79.9 wt.% glyceride (fat) mixture, 20 to 84.9% of one or at least two powder forming bases (Sakuma; page 13, line 5) selected from carbohydrates, proteins and peptides, and 0.1-5 wt.% water (Sakuma; abstract). The powder forming base includes carbohydrates such as corn starch, alpha starch or starch octenylsuccinate ester (Sakuma; page 12, line 6) and protein such as whey (Sakuma; page 13, line 2). Sakuma also discloses that the composition may include antioxidants (Sakuma; page 16, line 15), emulsifiers (Sakuma; page 18, line 5), and flavor (Sakuma; page 22, line 5) and that the powder forming base can be selected from a variety of ingredients including protein and carbohydrates. Additionally, Roberts discloses an egg substitute containing 30% to 70% whey protein as its major component for the purpose of producing a low cholesterol substitute having the physical properties of eggs when used in recipes [col. 3, lines 30-51].

At the time of the invention it would have been obvious to one of ordinary skill in the art having the teachings of Sarneel, Sakuma, and Roberts to modify the formulation in Sarneel to include whey protein in place of or in addition to eggs, because it well known in the art that whole

eggs containing yolk have a high amount of cholesterol and saturated fat that the replacement of the egg portion with whey protein is known to help reduce cholesterol levels in food products. This is further strengthened by the fact that the purpose of Roberts is to produce a low cholesterol egg replacer by using a whey protein based formulation [col.6, lines 32-34] and that Sarneel seeks to produce cholesterol-reduced baked products [pg.3 para 0047, 0048] by using starch n-octenyl succinate and starch while reducing the amount of egg used in the recipe formulations. Further, Sakuma discloses an oil/powder formulation that includes proteins such as whey protein and starches such as starch n-octenyl succinate, and that the protein and carbohydrates should be used in combination to increase the emulsion stability and storage stability dispersability of the oil/powder mixture in food products [Sakuma pg. 13 lines 4-10]. It would have been obvious to one skilled in the art to select a combination of ingredients such as starch octenylsuccinate, whey protein, and another starch to obtain different nutritional factors, taste, texture and flavor and based upon the properties the ingredients contribute in formulating low cholesterol food products. Although the references do not disclose starch octenylsuccinate and whey protein in the amounts as recited in the claims, it would have been obvious to vary the amounts of these ingredients depending on the desired nutrition, flavor, texture, and overall desired properties as long as they fall within the claimed range of 20% to 84.8% as disclosed in Sakuma, following the guidance of Sakuma, and through routine experimentation since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272.

Further regarding the formulation of starch octenylsuccinate and whey protein, Examiner points to *In re Levin 84* USPQ 232, which takes the position that "new recipes or formulas for cooking food which involve the addition or elimination of common ingredients, or for treating them in ways which differ from the former practice, do not amount to invention merely because it is not

disclosed that, in the constantly developing art of preparing no one else ever did the particular thing upon which the applicant asserts his right to patent. In all such cases, there is nothing patentable unless the applicant by a proper showing further establishes a coaction or cooperative relationship between the selected ingredients which produces a new, unexpected, and useful function."

Further regarding untreated starches, starches are well known in the food art, and though the combined references recite starch but do not specify natural and raw (untreated) starch, it would have been obvious to one of ordinary skill in the art to select a known material on the basis of its suitability as a matter of obvious choice to be used in processed foods.

Further, the oil/fat powder of Sakuma is preferably used for preparation of an oil/fat-containing processed food, such as bakery food as seen in application example 4 (Sakuma; page 21, line 10-11 and line 17). Depending on the preferred viewpoints of taste, texture, storage stability and dispersibility the oil/fat powder content in the oil/fat- containing processed food is from 20% to 80%, though depending on the kind of food (Sakuma; page 22, line 9-15). Regarding the dry mix of Sarneel, it would have been obvious to one having ordinary skill in the art at the time of invention to include the oil/fat powder of Sakuma to obtain desired nutritional factor, taste, texture and flavor in said food product.

Regarding Claims 16-17, 24-25, 27-29: Sarneel discloses a complete mix comprising a dry mix and a liquid selected from water, savory sauce, sweet sauce, dairy-based liquids, and mixtures thereof. The completed mix is based on a weight ratio of dry mix to liquid from 1:0.5 to 1:2 (Sarneel; page 11, ¶ 1-4). The dry mix further comprises 10-20% w/w gluten (protein), 1-10% w/w starch n-octenyl succinate, and 5-15% w/w flour but does not disclose whey protein or said starch being untreated starch. However, Sakuma discloses an oil/fat powder comprising 15 to 79.9 wt.% glyceride (fat) mixture, 20 to 84.9% of one or at least two powder (Sakuma; page 13, line 5) forming

bases selected from carbohydrates, proteins and peptides, and 0.1-5 wt.% water (Sakuma; abstract). The powder forming base includes carbohydrates such as corn starch, alpha starch or starch octenylsuccinate ester (Sakuma; page 12, line 6) and protein such as whey (Sakuma; page 13, line 2). Additionally, Roberts discloses an egg substitute containing 30% to 70% whey protein as its major components for the purpose of producing a low cholesterol substitute having the physical properties of eggs when used in recipes [col. 3, lines 30-51].

At the time of the invention it would have been obvious to one of ordinary skill in the art having the teachings of Sarneel, Sakuma, and Roberts to modify the formulation in Sarneel to include whey protein in place of or in addition to eggs, because it well known in the art that whole eggs containing yolk have a high amount of cholesterol and saturated fat that the replacement of the egg portion with whey protein is known to help reduce cholesterol levels in food products. This is further strengthened by the fact that the purpose of Roberts is to produce a low cholesterol egg replacer by using a whey protein based formulation [col.6, lines 32-34] and that Sarneel seeks to produce cholesterol-reduced baked products [pg.3 para 0047, 0048] by using starch n-octenyl succinate and starch while reducing the amount of egg used in the recipe formulations. Further, Sakuma discloses an oil/powder formulation that includes proteins such as whey protein and starches such as starch n-octenyl succinate, and that the protein and carbohydrates should be used in combination to increase the emulsion stability and storage stability dispersability of the oil/powder mixture in food products [Sakuma pg. 13 lines 4-10] It would have been obvious to one skilled in the art to select a combination of ingredients such as starch octenylsuccinate, whey protein, and another starch to obtain different nutritional factors, taste, texture and flavor and based upon the properties the ingredients contribute in formulating low cholesterol food products. Although the references do not disclose starch octenylsuccinate and whey protein in the amounts as recited in the

claims, it would have been obvious to vary the amounts of these ingredients depending on the desired nutrition, flavor, texture, and overall desired properties as long as they fall within the claimed range of 20% to 84.8% as disclosed in Sakuma, following the guidance of Sakuma, and through routine experimentation since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272.

Further regarding the formulation of starch octenylsuccinate and whey protein, Examiner points to *In re Levin 84* USPQ 232, which takes the position that "new recipes or formulas for cooking food which involve the addition or elimination of common ingredients, or for treating them in ways which differ from the former practice, do not amount to invention merely because it is not disclosed that, in the constantly developing art of preparing no one else ever did the particular thing upon which the applicant asserts his right to patent. In all such cases, there is nothing patentable unless the applicant by a proper showing further establishes a coaction or cooperative relationship between the selected ingredients which produces a new, unexpected, and useful function."

Regarding Claims 18, 20, and 23: Sarneel discloses a liquid composition for use in bakery products comprising water, and optionally, one or more flavoring, colorant, vitamin, and/or mineral (Sarneel; page 11-12). For example, 35 weight % of a dry mix comprising 15% vital wheat gluten, 37% starch hydrolysate, 7% n-OSA starch, etc., is mixed with 65% by weight of apple puree and is then brought on top of a laminated pastry dough. Peach pieces can be placed on top of the completed filling, and the total is closed with pastry dough layer, before baking, the final result is a sweet bakery product (see figure 5). (Sarneel; page 14, ¶ 3).

Regarding Claims 21 and 30: Sarneel discloses a process of baking the dough is carried out at a temperature in the range 170-225 °C (Sarneel; page 26, ¶ 1). Sarneel does not disclose baking at the temperature of 160 °C, however, to find optimum working temperatures within a disclosed set

of ranges is prima facie obvious. Further, the baking temperatures are substantially close to that of the instant claims, one of ordinary skill would have expected compositions that are in such close proportions to those in prior art to be prima facie obvious and to have same properties. *Titanium Metals Corp.*, 227 USPQ 773 (CAFC 1985),

Regarding Claims 22 and 31: Sarneel discloses a process of baking the dough in a receptacle (Sarneel; page 14, ¶ 3). Sarneel does not disclose to a non-coated iron, however, it is very well known in the bakery art to bake goods in iron pans, whether coated or non-coated. One would have been motivated to do so in order for the baked product to maintain its shape and the iron receptacle will even the heat distribution of the baked product while in the oven.

6. **Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sarneel et al. (WO 04/084640) in view of Sakuma et al. (WO 03/067999) and Roberts (US 4,103,038) as applied to claim 1 above and further in view of Gisaw et al. (US 6,558,730).**

Regarding Claim 5: Sarneel and Sakuma do not disclose the starch n-octenyl succinate as derived from high amylopectin source. However, Gisaw discloses using a number of different starches within its dough preparation, such as the dry mix in example 1, containing raw corn (untreated) starch and modified starches (Gisaw; columns 8-9). Gisaw discloses in addition to modified starches such as waxy corn starch (which has high amylopectin) (Gisaw; column 8, line 37), starch n-octenyl succinate and mixtures thereof. It is common to include starch-based materials in the dough compositions of fabricated snacks. The high amylopectin starch and/or pregelatinized starch is used to provide a dough having desired performance properties (e.g., cohesive, non-adhesive, continuously sheetable) (Gisaw; column 1, line 28-35 and column 9, line 10-19) and to further improve the visco-elastic properties of the dough which is important for obtaining the desired internal structure as well as the final texture of the snack (Gisaw; column 4, line 43-45).

At the time of the invention it would have been obvious to one of ordinary skill in the art having the teachings of Sarneel, Sakuma, Roberts, and Gisaw, regarding the starches of the Sarneel, to use varying mixtures of starches as taught by Gisaw, including n-octenyl succinate from waxy corn starch. One would have been motivated to do so to improve the visco-elastic properties of the dough which are important for obtaining the desired internal structure as well as the final texture of the snack (Gisaw; column 4, line 43-45) while at the same time provide a dough which produces an acceptable snack.

7. **Claims 11 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sarneel (US 2002/0037351) in view of Takashima (US 2001/0055638) and Roberts (US 4,103,038).**

Regarding Claims 11 and 26: Sarneel discloses a composition to use in bakery products comprising untreated flour, and starch n-alkenyl succinate, and optionally starch (Sarneel; abstract). The formulation of the composition consist of 60-95% w/w untreated flour, 5-30% w/w starch n-alkenyl succinate, and 0-50% w/w starch, wherein starch n- alkenyl succinate is from C6 and c l 6 succinate, preferably starch C8 (octenyl) succinate, and wherein starch n-alkenyl succinate is undextrinized, dextrinized, cooked-up, pregelatinized, or stabilized and/or mixture thereof (Sarneel; ¶ 0037). Sarneel further discloses wherein said bakery product normally comprises 0 to 40% eggs and from 0 to 10% w/w emulsifier (Sarneel; ¶ 0039) but does not disclose the composition comprising whey protein. However, Takashima discloses adding thermocoagulation proteins, such as whey protein, to fix the cellular sponge structure formed by coagulation during heating. Thus maintaining the swollen state of the bake good and preventing bake shrinkage. "The thermocoagulation proteins used in the present invention consist of proteins containing albumin and globulin, including, for example, egg white, casein, and whey protein." (Takashima; ¶ 0026). As

seen throughout the disclosure examples, whey protein may be present from about 0-15 w/w% of the composition. Additionally, Roberts discloses an egg substitute containing 30% to 70% whey protein as its major components for the purpose of producing a low cholesterol substitute having the physical properties of eggs when used in recipes [col. 3, lines 30-51].

At the time of the invention it would have been obvious to one of ordinary skill in the that art having the teachings of Sarneel, Takashima, and Roberts before him or her to include whey protein as Takashima, as a complete or partial substitute for the egg containing composition in Sarneel because as disclosed in Roberts substituting out the egg for whey protein helps to lower cholesterol content of food product and further whey protein helps to maintain the swollen state of the bake good and helps to prevent baking shrinkage.

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 11 and 26 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 4, 8 and 17 of U.S. Patent No. 6663909 B2 in view of U.S. Publication No. 2001/0055638 A1. The references and rejection are incorporated as cited in the Office action dated February 2, 2009.

Response to Arguments

10. Applicant's arguments, see pgs 6-8, filed 12/4/09, with respect to the rejections of claims 1-7, and 9,10-25,27-31 under Sarneel et al. (WO 04/084640) and secondary references Sakuma et al. (WO 03/067999) Gisaw et al. (US 6,558,730) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Sarneel et al. (WO 04/084640) and secondary references Sakuma et al. (WO 03/067999) and Roberts (US 4,103,038) and Gisaw et al. (US 6,558,730).

11. Applicant's arguments, see pg 9, filed 12/4/09, with respect to the rejection of claims 11 and 26 under Sarneel (US 2002/0037351) and Takashima (US 2001/0055638) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground of rejection is made in view of Sarneel (US 2002/0037351), Takashima (US 2001/0055638), and Roberts (US 4,103,038).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to FELICIA C. KING whose telephone number is (571)270-3733. The examiner can normally be reached on Mon- Thu 7:30 a.m.- 5:00 p.m.; Fri 7:30 a.m. - 4:00 p.m. alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/F.K./
Examiner, Art Unit 1794

/Jennifer C. McNeil/
Supervisory Patent Examiner, Art Unit 1794